

Mathematics Toolkit: Grade 3 Objective 3.B.1.a

Standard 3.0 Knowledge of Measurement

Topic B. Measurement Tools

Indicator 1. Measure in customary and metric units

Objective a. Measure length of objects and pictures of objects using a ruler, a tape measure, a yardstick, or a meter stick

Assessment Limits:

Use a ruler and the nearest centimeter or $\frac{1}{2}$ inch

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Scoring Rubric

- Rubric - Brief Constructed Response

Sample Item #1 - Selected Response (SR) Item

Mathematics Grade 3 Objective 3.B.1.a

What is the length of the line, to the nearest centimeter?



- A. 2 centimeters
- B. 3 centimeters
- C. 4 centimeters
- D. 5 centimeters

Correct Answer:

D

Sample Item #2 - Selected Response (SR) Item

Mathematics Grade 3 Objective 3.B.1.a

Measure the height of the can to the nearest $\frac{1}{2}$ inch.



- A. 2 inches
- B. $2\frac{1}{2}$ inches
- C. $3\frac{1}{2}$ inches
- D. 4 inches

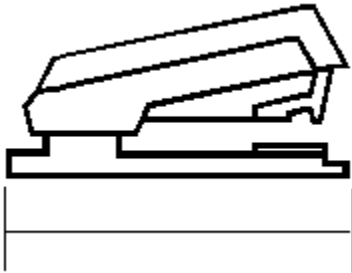
Correct Answer:

D

Sample Item #3 - Brief Constructed Response (BCR) Item

Mathematics Grade 3 Objective 3.B.1.a

Look at the stapler.



Step A

What is the length of the stapler to the nearest $\frac{1}{2}$ inch?

Step B

Explain why your answer is correct.
Use what you know about measurement in your explanation.
Use words and/or numbers in your explanation.

Correct Answer:

Step A
 $3\frac{1}{2}$ inches

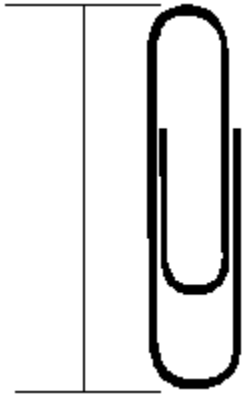
Answer Annotation

Sample correct response: I placed my ruler with 0 at the end of the stapler. I lined up the other end with the other end of the stapler. The number on the ruler next to that end was a number between 3 and $3\frac{1}{2}$. The end was closer to $3\frac{1}{2}$.

Sample Item #4 - Brief Constructed Response (BCR) Item

Mathematics Grade 3 Objective 3.B.1.a

Casey used this giant paper clip to hold her papers together.



Step A

What is the height of the paper clip to the nearest centimeter?

Step B

Explain how you found your answer.
Use what you know about measurement in your explanation.
Use words and/or numbers in your explanation.

Correct Answer:

Step A
9 cm

Answer Annotation

Sample correct response: I placed my ruler with 0 at the top of the paper clip. I lined up the other end of the ruler with the bottom. The number on the ruler was between 8 and 9. The end was closer to 9.

Rubric - Brief Constructed Response (BCR)

Score 2

The response demonstrates a complete understanding and analysis of a problem.

- Application of a reasonable strategy in the context of the problem is indicated.
- Explanation¹ of and/or justification² for the mathematical process(es) used to solve a problem is clear, developed, and logical.
- Connections and/or extensions made within mathematics or outside of mathematics are clear.
- Supportive information and/or numbers are provided as appropriate.³

Score 1

The response demonstrates a minimal understanding and analysis of a problem.

- Partial application of a strategy in the context of the problem is indicated.
- Explanation¹ of and/or justification² for the mathematical process(es) used to solve a problem is partially developed, logically flawed, or missing.
- Connections and/or extensions made within mathematics or outside of mathematics are partial or overly general, or flawed.
- Supportive information and/or numbers may or may not be provided as appropriate.³

Score 0

The response is completely incorrect, irrelevant to the problem, or missing.⁴

Notes:

- ¹ Explanation refers to students' ability to communicate how they arrived at the solution for an item using the language of mathematics.
- ² Justification refers to students' ability to support the reasoning used to solve a problem, or to demonstrate why the solution is correct using mathematical concepts and principles.
- ³ Students need to complete rubric criteria for explanation, justification, connections and/or extensions as cued for in a given problem.
- ⁴ Merely an exact copy or paraphrase of the problem will receive a score of "0".

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